Water Operations Summary: Game 5. Year 2001 water year.
May 26, 1999 Draft

Scenario: No in-Delta AFRP			Target Year: End of Stage 1
Possible Water Supply Measures	Details	EWA/ Users Division	How to Model How to Game
South Delta Program - 8.5 kcfs	8.5 kcfs. Expansion of Corps Criteria. 6.4 kcfs + 1/3 SJR during November - March. 8.5 kcfs during summer (dates?)	Projects below E/I. EWA above E/I	Model in baseline.
JPOD. No individual State/ Federal sublimits	No state or federal sublimits apply	Projects below E/I. EWA above E/I	Model in baseline.
Allow E/I variances			EWA may allow pumping above E/I for credit..
Partial Credit for AFRP/ VAMP relaxations	Each month, estimate extra pumping generated by relaxations. EWA receives ½ share, delivered to SOD storage site chosen by EWA.	Eqaul Projects/ EWA share	Relaxation is in baseline model. Credits to EWA are done by hand. This will reduce actual Project deliveries below modelled estimate.
Kern Water Bank	200 kaf storage. 20 kaf/ month in. 20 kaf /month out.	EWA	Operate by hand in game. Capacity is high priority -- no preemption by Kern.
Semitropic high priority storage	200 kaf storage 20 kaf/ month in. 10 kaf/ month out.	EWA	Operate by hand in game.
Shasta Dam Expansion	50 kaf storage	EWA	Operate in model
Water purchases	See attached description	EWA	Operate by hand in game
Demand shifting	100 kaf. Short term storage lease in San Luis.	EWA	Operate by hand in game
Access Surplus Capacity		EWA	Operate by hand in game

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Initial Conditions

- All storage is empty
- Long-term options begin in the first year of simulation

EWA Budget

$50 million/year, paid on October 1 of each year. Funds may accrue. The EWA may borrow up to $50 million of future income. EWA funds accrue interest at 5% per year. Borrowing costs 5% per year. Capital costs for assumed facilities are outside the game. EWA may build up its fiscal reserves by selling or leasing its rights to water or facilities.

Transfers

See Water Purchase Schedule

Price Schedules

Discretionary and operating costs must be paid for using the EWA budget. These costs include:

- Water Purchases -- See Water Purchase Schedule
- Water sales by EWA -- Price to be negotiated during game.
- Groundwater pumping costs --

  Kern at $100/af
  Semitropic at $200/af

- Demand Shifting

  $100/af to rent up to $100 kaf of storage in San Luis from MWD
  Intention to shift storage must be declared by June 1
  Water must be paid back by January 1 of next year or $1000/af payment

Modeling Basis

Based upon the matrix above, the modeling upon which the game would be founded would be run with the following assumptions:

D-061691

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- o 1995 Level of Development
- o Accord + VAMP + upstream AFRP + Trinity
- o South Delta Improvements (limited 8.5 kcfs)
- o Unlimited JPOD

- o VAMP San Joaquin flow schedule

Water Supply Evaluation

The results from the modeling basis plus any yield developed because (1) EWA water supplies San Luis lowpoint requirements and (2) by borrowing EWA groundwater storage minus credits allocated to EWA as share of in-Delta AFRP relaxations will roughly represent estimated Project deliveries.

Game Rules

- o EWA has the right to carry debt and to use Project facilities, provided it can assure no harm, unless arrangements for compensation are agreed to in advance. Thus, the EWA may borrow against future water supplies, may shift Project storage from upstream storage to downstream storage, etc., provided that it can make the Project's whole before the water is needed.
- o EWA must have secure collateral for any borrowing it undertakes within a year. It may carry over debt (if otherwise allowed) without specifically identified collateral.
- o Unless otherwise specified, EWA has low priority access to Project facilities.
- o Movement of water through the Delta when outflow is controlling has a carriage water cost of 20%. Backing water upstream via export reductions when outflow is controlling reduces carriage water by 20%. Moving water from the San Joaquin tributaries has a cost of 10%.
- o Projects may borrow EWA storage within San Luis in order to satisfy low point requirements.
- o Projects may borrow EWA groundwater storage on a low priority basis.

D-061692